

COURSE OBJECTIVES

You will learn the basic concepts, methods, and technologies needed to analyze, specify, design, build, and test combinational and synchronous sequential logic circuits with standard integrated circuits and programmable logic devices.

STUDENT LEARNING OUTCOMES – By the end of the course, you will have demonstrated an ability to do the following.

1. Apply knowledge of basic discrete mathematics and computer engineering principles.
2. Design small digital systems that meet a specified need within realistic constraints.
3. Use modern industry standard design tools.

INSTRUCTOR

Bill Carroll, Professor, Computer Science and Engineering
Office: ERB 521 Office Hours: MT 4:00 to 6:00 PM, W 11:00 AM to 1:00 PM, or by appt.
Phone: 817-272-3787 Email: carroll@uta.edu
Course web-site: *Blackboard*, <https://elearn.uta.edu>

LABORATORY INSTRUCTOR

TBA, Graduate Teaching Assistant
Office: TBA Office Hours: TBA
Phone: TBA Email: TBA

TIME AND PLACE

Section 001 (lecture) – TuTh 2:00 to 3:20 PM, ERB 130
Section 002 (lab) – Fr 9:00 to 11:50 AM, ERB 127
Section 003 (lab) – Th 3:30 to 6:20 PM, ERB 127

PREREQUISITES – CSE 1320 and CSE 2315. Co-requisite – EE 2440

TEXTBOOK – Manuscripts of selected chapters from Nelson, Nagle, Carroll, Irwin, *Digital Logic Circuit Analysis & Design, 2^{ed}*, will be posted on *Blackboard*, <https://elearn.uta.edu>

HANDOUTS – will be posted on *Blackboard*, <https://elearn.uta.edu>

GRADING

A: 100-90, B: 89-80, C: 79-70, D: 69-60, F: 59-0 with points computed as follows.

$0.20 \cdot \text{Exam1} + 0.20 \cdot \text{Exam2} + 0.20 \cdot \text{FinalExam} + 0.15 \cdot \text{LabAverage} + 0.15 \cdot \text{DesignProject} + 0.10 \cdot (\text{HomeWorkAverage} \& \text{ClassParticipation})$. Students not completing one or more of these requirements may receive an Incomplete grade (I) in the course.

EXAMINATIONS

There will be two examinations during the semester plus a comprehensive final exam. See the lecture schedule for the dates. Examinations will be closed book and closed notes.

HOMEWORK

Homework will be given on a regular basis, will be graded, and will count toward your course grade both directly and indirectly. Late homework will generally not be accepted.

ACTIVE LEARNING

Active learning exercises will be performed in class on a regular basis to help you better understand the concepts being covered in the course. These exercises will typically be done in small groups. All students are expected to participate. Some may be graded and count as homework and class participation.

LABORATORY

Laboratory exercises and experiments are designed to reinforce materials presented in class and to give you experience in designing, building, and testing digital logic circuits. Please see the laboratory schedule for more details. Lab sessions meet in ERB 127.

TERM PROJECT (ABET project)

There will be an individual term design project toward the end of the course. The project will include design, implementation, testing and documentation of a small digital system to meet user specifications within realistic constraints. More details on the project will be provided later in the semester. This project must be completed and the project report submitted in order to receive a final grade (A,B,C,D,F) in the course. Those not submitting a final project report will get a grade of Incomplete or F depending upon their grade on other course work.

POLICIES

1. **Academic Integrity** – Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code.

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

2. **Attendance** – You are expected to attend class and attendance will be checked on a regular basis. Those with more than two unexcused absences from the lecture and/or laboratory will have their final average reduced by five points for each additional absence before their final letter grade is assigned.

3. **Accommodations** – Should you require accommodation based on disability, please see me in the privacy of my office as soon as possible but no later than August 27, 2014 to make appropriate arrangements. You must bring supporting documentation to the meeting.
4. **Electronic communication** – The University of Texas at Arlington has adopted the University “MavMail” address as the sole official means of communication with students. MavMail is used to remind students of important deadlines, advertise events and activities, and permit the University to conduct official transactions exclusively by electronic means. For example, important information concerning registration, financial aid, payment of bills, and graduation are now sent to students through the MavMail system. All students are assigned a MavMail account. Students are responsible for checking their MavMail regularly. Information about activating and using MavMail is available at <http://www.uta.edu/oit/email/>.
5. **Grade appeals** – Should you have a concern about the grade you received on an assignment or exam, you may submit a re-grading request to the instructor or TA in writing within two class days from the day the assignment or exam was returned. Appeal of the final course grade should follow the established UT Arlington policy which begins with a written appeal to the course instructor of record. You can learn more about grade appeals and other academic regulations at http://www.uta.edu/catalog/content/general/academic_regulations.aspx#17.
6. **Make-up work** – Late homework will not be accepted and cannot be made up. Make up of missed examinations and laboratory assignments will be handled case-by-case and, generally, be approved only if sufficient justification can be made and documented. Requests for make-up must be made to the instructor within one week of the missed work’s due date.
7. **Preparation for class** – You are expected to read the appropriate sections of the textbook and supplemental material prior to each class and/or lab session.
8. **Student feedback** – You will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions on how to access the SFS system will be sent to you through MavMail approximately ten days before the end of the term. UT Arlington’s efforts to solicit, gather, tabulate, and publish student feedback data is required by state law; your participation in the SFS program is voluntary.
9. **Student support services** – UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their studies. These resources include tutoring, personal counseling, and federally funded programs. For individualized referrals to resources, students may contact the Maverick Resource Hotline at 817-272-6107 or visit www.uta.edu/resources for more information. Engineering Student Services, 242 Nedderman Hall, is another resource for guidance on academic and career questions.
10. **Cell phones and wireless devices** – Please refrain from using cell phones during class times. All electronic devices must be powered off during examinations. Use of tablets or laptops for viewing class materials is permitted.
11. **Title IX** – The University of Texas at Arlington is committed to upholding U.S. Federal Law “Title IX” such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.
12. **Emergency Exit Procedures** – Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.